

WEATHER IN THE UNITED STATES

GENERAL CONDITIONS

The warmth of the month was the one outstanding feature of the weather. Precipitation in several localities was about double the normal. All in all it was a warm and moist month.—A. J. H.

CYCLONES AND ANTICYCLONES

W. P. DAY

Low-pressure areas were considerably more numerous than in January, and the more important depressions numbered 22. A majority of these were of Pacific origin or secondary developments over the Rocky Mountain region in conjunction with the Pacific types.

Twelve high-pressure areas were plotted, but only two were important as cold waves over any considerable area. These cold-air masses spread southeastward from Canada near the end of the first and second decades; otherwise temperatures were generally above the normal.

THE WEATHER ELEMENTS

By P. C. DAY, In Charge of Division

PRESSURE AND WINDS

The month was notably stormy on the Pacific coast, low pressure prevailing during much of the first week and again from the 12th to 25th, when precipitation occurred almost daily. It was heavy to excessive on a number of dates, particularly in southern California where from about the 14th to 16th the falls were among or actually were the greatest of record, causing much loss and damage by washing and flooding of roads and fields, destruction of bridges, etc. Considerable delay to traffic occurred due to impassable roads, and entire communities were without means of surface communication for varying periods. On account of the well-soaked condition of the soil prior to the occurrence of these heavy rains the run-off was heavy and all reservoirs were filled and ample supplies of water are assured.

Over the remainder of the country pressure was frequently low and there was considerable cyclonic activity, though this was confined mainly to the latter half. About the 13th low pressure developed in the Southwest and by the middle of the month stormy conditions had extended to the lower Lake region and precipitation had covered a wide area from the Rocky Mountains eastward, the rains being heavy to excessive over much of the Gulf region, with considerable snow from the middle Missouri Valley eastward to the Great Lakes and some sleet in southern New England. This storm moved into the St. Lawrence Valley during the 15th with generally lessened importance.

An important cyclone moved into the middle Plains by the morning of the 17th and by the following morning had advanced to the Middle Gulf States causing general precipitation over most central and southern districts from the Great Plains eastward, with local heavy rains in portions of the lower Mississippi Valley, New Orleans receiving nearly 7 inches in the 24 hours ending 8 a. m. of the 18th with an additional inch during the following day. This barometric depression gathered strength to the southward and on the morning of the 19th was central near the Georgia coast and heavy precipitation had occurred over portions of the east Gulf and South

Atlantic States while lighter amounts had fallen over the remaining Atlantic coast area, the precipitation changing to heavy snow or sleet in the more northern localities. This storm moved northeastward somewhat off the coast during the following 48 hours, causing rain, sleet, or snow from the Ohio Valley eastward and northeastward, the precipitation changing to heavy sleet along the North Atlantic coast and to moderately heavy to heavy snow over the near-by interior districts. High winds and tides occurred during this time particularly along the New Jersey coast, where much damage resulted, while in some districts back from the coast heavy glaze greatly damaged overhead wire systems.

A slight barometric depression central in the lower Mississippi Valley on the morning of the 23d, moved eastward to the Carolina coast during the following 24 hours and was accompanied by some heavy rains over the east Gulf and South Atlantic States. Another slight depression, central over the Ohio Valley on the morning of the 25th, developed considerably by the following morning, when it appeared as two storms, one central over Lake Ontario and the other covering southern New England. These combined later and moved toward the Canadian Maritime Provinces. Precipitation from this storm covered most districts from the Mississippi River eastward, considerable snow occurred over the Great Lakes region and to the eastward, becoming heavy and wet toward the coast and causing some damage to wire systems. At the close of the month a cyclone of considerable importance had moved from the Southern Plateau to southern Texas, with precipitation rather general, but light, from the Rocky Mountains and western Great Plains south-eastward to near the west Gulf coast, snow falling over the northern half of the area.

Anticyclones were mainly unimportant though on the 9th one of marked strength had entered the upper Missouri Valley and during the following few days moved southeastward to the Atlantic coast attended by generally fair and moderately cold weather over most districts from the Rocky Mountains eastward. Another of considerably smaller proportions entered Manitoba and the Dakotas on the morning of the 12th and moving eastward along the northern border during the following day or two brought some sharp temperature falls, particularly in the St. Lawrence Valley. Another anticyclone that gave promise of an extensive lowering of temperature over the Great Plains and central valleys and to the eastward, entered the Canadian Northwest and upper Missouri Valley on the 17th, with temperatures from 20° to 30° below zero near the center. It moved into the middle Missouri Valley during the following 24 hours and brought sharp temperature changes over the Great Plains and west Gulf region, the lowest temperatures of the month occurring over the States from Arkansas and Louisiana eastward on that and the following day or two as the effects of the anticyclone slowly extended eastward over the Southern States. From its main center over the middle Missouri Valley on the 18th, this anticyclone moved rapidly to the Northeast and on the 19th it had passed beyond the Great Lakes and to the southeastward of Hudson Bay. The sharp falls in temperature expected from this HIGH, which materialized in the far southern and northern districts, did not occur over the Central States from the Mississippi Valley eastward due to the development of cloudy, rainy conditions in that area.

The average pressure was nearly everywhere less than that normal for February, though in the Great Plains